

**Abstract of the Disclosure**

The invention provides a substrate layout method and structure of a ball grid array to reduce cross talk of adjacent signals. The substrate comprises a plurality of signal pads formed on a die, a ring around the die, and a plurality of signal fingers around the ring.

- 5      The substrate layout method for reducing cross talk of adjacent signals is as follows: First, forming a guard pad between two adjacent signal pads. Second, forming a guard finger between two adjacent signal fingers. Next, forming a bonding wire to connect the guard pad to the ring. Then, forming another bonding wire to connect the ring to the guard finger. Subsequently, forming a guard trace to connect the guard finger to a via at the edge of the  
10     substrate, and connecting the guard trace to a short-circuiting place through the via.